

CLAIMS

1. For reducing sag in a suspended cable, a sag-compensating device having a first end and a second end and comprising an actuator disposed therebetween, wherein
5 the actuator contracts as its temperature increases, and wherein at least one end is connected, directly or indirectly to the suspended cable, wherein as the temperature of the actuator increases, the actuator contracts, and a pulling force is applied to the cable by the actuator, reducing sag in the cable.
- 10 2. The device of claim 1 wherein one end of the device is attached to a suspended cable and the other end is connected to a fixed point.
3. The device of claim 2 wherein the fixed point is a tower.
- 15 4. The device of claim 1 wherein the device is strung continuously within the span of a suspended cable, and wherein both the first end and the second end is connected to two different points of the suspended cable.
5. The device of claim 1 wherein the cable is a power line that carries a current.
- 20 6. The device of claim 5 wherein at least part of the current is conducted through the device.
7. The device of claim 5 wherein at least part of the current is conducted through the
25 actuator.
8. The device of claim 5 wherein the device further comprises a structural element disposed between the first and second end of the device.

9. The device of claim 8 wherein the structural element is a tubular housing having a first end and a second end and wherein the tubular housing substantially surrounds the actuator, and contacts the shape memory alloy via a pivoted contact point at at least one end.

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10. The device of claim 8 wherein the pulling force of the actuator is transmitted by at least one lever pivotally attached to the structural element.

11. The device of claim 10 wherein the device employs only a single lever.

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12. The device of claim 1 wherein the pulling force of the actuator is transmitted to the line directly, without the use of a lever.

13. The device of claim 1 wherein the actuator comprises a shape memory alloy.

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14. The device of claim 13 wherein the shape memory alloy comprises a binary nickel-titanium (NiTi) shape memory alloy.